



Pension Section News

Preferences Survey

by Emily K. Kessler, FSA, SOA staff fellow, retirement systems

There has been a lot of debate about whether defined benefit (DB) or defined contribution (DC) plans are better. As actuaries, we've done a lot of work with plan sponsors and understand what drives their preference for DB or DC plans. But little was understood about how members actually felt about their plans. What did they prefer: DB or DC? What do they understand?

The Committee on Retirement Systems Research, in cooperation with the American Academy of Actuaries and the Pension Section Council, sponsored the Retirement Plan Preferences Survey to answer those questions. The firm of Mathew Greenwald & Associates conducted the research and has been instrumental in shaping the survey and the report. A survey database was constructed to poll a panel of workers and retirees with both defined benefit and defined contribution plans; 790 workers (75 percent) and 600 retirees (33 percent) responded.

Some of the more interesting findings included:

People prefer what they know.

Both workers and retirees express a preference for the type of plan they already have.

- 62 percent of workers and 56 percent of retirees with defined contribution plans prefer defined contribution plans. Only 19 percent of workers and 28 percent of retirees with defined contribution plans prefer defined benefit plans.

- 51 percent of workers and 68 percent of retirees with defined benefit plans prefer defined benefit plans. Only 30 percent of workers and 17 percent of retirees with defined benefit plans prefer defined contribution plans.

Lifetime income is a primary concern for retirees.

- 82 percent of retirees say that the provision of a guaranteed stream of income for life is a very important feature of a retirement plan. This was true for retirees in DB plans (85 percent) and DC plans (71 percent).
- 59 percent of workers stated that provision of guaranteed lifetime income was very important (68 percent in DB plans and 51 percent in DC plans).

When asked a similar question about payout options, both retirees and workers again preferred at least part of the money be available as a life annuity. The table on page four summarizes what features retirees and workers say are very important when making payout decisions. Surprisingly, both DC and DB plan participants show a strong preference for those features commonly associated with annuities. These stated preferences contradict participant behavior, namely, a strong preference for lump sum payments. Further survey results indicated retirees were attempting to create their own income stream by managing their own funds.

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Your help and participation is needed and welcomed. All articles will include a byline to give you full credit for your effort. *News* is pleased to publish articles in a second language if a translation is provided by the author. For those of you interested in working on the *News*, several associate editors are needed to handle various specialty areas such as meetings, seminars, symposia, continuing education meetings, teleconferences and cassettes (audio and video) for Enrolled Actuaries, new pension study notes, new research and studies by Society committees, etc. If you would like to submit an article or be an associate editor, please call Arthur J. Assantes, editor, at 860.521.8400.

As in the past, full papers will be published in *The Pension Forum* format, but now only on an ad hoc basis.

News is published quarterly as follows:

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Preferred Format

Please use the following format when submitting articles:

E-mail your articles as attachments in either MS Word (.doc) or Simple Text (.txt) files. We are able to convert most PC-compatible software packages. Headlines are typed upper and lower case. Please use a 10-point Times New Roman font for the body text. Carriage returns are put in only at the end of paragraphs. The right-hand margin is not justified.

If you must submit articles in another manner, please call Bryeanne Summers, 847.706.3573, at the Society of Actuaries for help.

Please send a hard copy of the article to:

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Thank you for your help.

Chairperson's Corner

by C. Ian Genno

The success of the Pension Section Council is, in part, attributable to a governance structure that calls for new members to be elected to the council for three-year terms, and for the roles of council members to evolve during their terms. Since the last issue of the *Pension Section News*, we've gone through a planned transition of membership on the Council.

Three colleagues have retired from the council: John Kalnberg, Marilyn Oliver and Zenaida Samaniego. John, Marilyn and Zenaida have made significant and meaningful contributions to the Pension Section over the last three years—both in designated roles managing specific aspects of the council's ongoing operations, and in directly addressing the needs of Pension Section members through the development and delivery of practical research initiatives, technical tools and continuing education opportunities. As colleagues on the council, we've benefited tremendously from their insight and dedication over the last three years. Thank you, John, Marilyn and Zenaida, for your contributions!

Joining the council are three newly elected members (as announced in the last issue): Anne Button, Betsey Byrd and Art Conat. Each one of them brings new perspectives and talents to the table, and they've hit the ground running in their first council conference calls and meeting. We're delighted to have the opportunity to work with them.

Within the council, several individuals' roles have evolved; the contact list below shows the new council structure. This allows us each an opportunity to contribute in a different way to the ongoing governance of the section. More important than the designation of specific roles, though, is the interest and commitment that all council members share in delivering useful, practical resources for Pension Section members.

In the last "Chairperson's Corner" Marilyn Oliver summarized some of the council's current research projects and several useful resources that have been posted recently on the SOA Web site. There have also been some insightful articles in the *Pension Section News* and *Pension Forum*. If you haven't had an opportunity yet, take a look—whether you're interested in statistics, analytical tools, practical research or opportunities to think about pension plan design and financial issues in a different way, there's something there for everyone.

In addition to disseminating information and ideas electronically and in print mailings, the council strives to offer a variety of face-to-face opportunities to learn from and share ideas with other pension practitioners. We're currently working with the SOA's Spring Meeting Committee to organize 16 sessions for the May meeting in Anaheim. And, motivated by a broader desire to increase the Pension Section's interaction, collaboration and visibility with non-actuaries who are involved in the pension business, we

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Percentage saying features are very important	Workers			Retirees		
	Total	DB	DC	Total	DB	DC
Guaranteed lifetime income	69%	61%	75%	86%	75%	89%
Not outliving one's money	69%	67%	73%	77%	73%	77%
Keeping up with inflation	65%	62%	67%	75%	70%	75%
Maintaining control of savings	61%	67%	56%	54%	60%	53%
Protect against market downturns	53%	53%	51%	55%	61%	54%

Workers want features DB plans can't easily provide.

Workers in DB and DC plans were equal in rating some features highly important. Responses of workers in DB plans clearly show that workers want features that aren't currently available to them (e.g. contributory plans with investment direction).

Percentage ranking each feature as very important	All Workers	Workers in DC Plans	Workers in DB Plans
Guaranteed income for life	59%	51%	58%
Portability	54%	63%	48%
Automatic saving through payroll deduction	53%	64%	44%
Regular paper statements	41%	42%	38%
Immediate access to information	40%	44%	38%
Direct investment choices	39%	51%	28%
Base benefit on years of service and final pay	33%	25%	45%

Workers and retirees don't understand retirement risk.

Finally, the survey confirmed the lack of understanding workers had about their plan features:

- Workers and retirees were reluctant to convert \$100,000 lump sum into monthly lifetime income. One-quarter of workers and almost four in ten retirees did not know or did not provide an answer. One-third of workers and retirees thought that \$500 (a very conservative answer) was the correct amount, and about one-quarter of workers and two in ten retirees thought \$1,000 was the correct amount. Depending on annuity conversion interest rates, the monthly benefit would be between \$700 and \$1000.

- 50 percent of workers in DC plans and 34 percent of workers in DB plans do not understand their plan well enough to be able to estimate their retirement plan.
- 25 percent of workers in DC plans and 20 percent of workers in DB plans don't understand their plans well enough to know when they'd be able to start payments should they terminate prior to retirement.
- Yet, if polled, most workers are satisfied with communication they receive from their plan.
 - 51 percent say communication about plan benefits is excellent or good.
 - 41 percent say the information they receive on retirement planning is excellent or good.

The survey was also presented at the Vancouver Spring Meeting and the Orlando Annual Meeting. You can go online to view the presentations. The Vancouver presentation is at http://www.soa.org/conted/cearchive/vancouver/069_combined.pdf and the Orlando presentation is at http://www.soa.org/conted/cearchive/orlando03/061_combined.pdf.

At the time this article was written, the link for the final survey was not yet available. However, it should be available by publication date on the Research page of the SOA Web site (<http://www.soa.org/research/index.asp>). ♦

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Group Variable Annuity Pension Plan

by Thomas Lowman, FSA

Our basic pension concepts are being successfully challenged by Jeremy Gold and others. As a result, change will occur. These changes could relate to funding and/or plan design. I have two challenges for those reading this. The first is to critique my idea outlined below. The second is to come up with their own idea and talk to others about it.

Section 1: Basic Design and Concept:

This is a proposal to change the law on DB plan design in response to the challenges facing DB plans. The proposed design would tie benefits to funding levels. This design would be an option only and would not replace existing plan design options.

Many of the “financial economics” challenges to existing DB practices were well covered at the SOA symposium held in Vancouver on June 24 – 25, 2003 and are the motivation behind this proposal. Some of the problems I will try to address are:

1. Decline in DB plans.
2. Lack of transparency of expense.
3. Pressure to reduce (eliminate) investment in equities by DB plans.
4. Likelihood that taxpayers will fund PBGC deficit
5. Loss of pension actuarial jobs.

I do not intend to provide a solution to the current employer funding problems or the increasing cost of existing DB promises, but rather to reduce future problems. Current funding problems might best be thought of as legacy problems in separate plans (i.e., new accruals are provided by a separate plan).

My proposal starts with having future accruals include contingent indexing pre- and post-termination of employment. Liability values that include future indexing I have noted with the word “Indexed” as a subscript and values with no future indexation I have noted with the word “Basic.” I have not specified the exact nature of the index. It might cover the spread between our current valuation assumptions and those asked for by financial engineering models (e.g., 8 percent less 5 percent or part of the “equity risk premium”). However, a smaller index might be appropriate. The benefit formula and index might take the following forms:

Career Average Earnings or fixed-dollar plan with 1.5 percent annual index from date accrued.

However, the indexing would be tied to the funding level as described below. Participants would be at risk for future indexation but not base benefits or past indexing.

The value of accrued benefits assuming future full indexation I will call $ABO_{Indexed}$. There would be another measure of ABO without future indexing (ABO_{Basic}). The employer would be able to terminate the plan at any time if it just covered ABO_{Basic} . PBGC does not guarantee COLAs so its liability would be no more than ABO_{Basic} .

A given year's indexation would be based on the maximum assumed index (e.g. 1.5 percent) times $(Assets - ABO_{Basic}) / (ABO_{Indexed} - ABO_{Basic})$ (Note: the ratio should be no less than 0 and no more than 1). For example, if the funding level were halfway between ABO_{Basic} and $ABO_{Indexed}$ the increase would be half the maximum. The increase would be applied to all participants (actives and inactive).

Funding of current accruals (normal cost) would assume that all future indexation would occur (i.e. there is no NC_{Basic}). Any past indexing on prior accruals that did not occur due to funding levels below $ABO_{Indexed}$ would be lost.

We assume that the employer's expense will become based on changes during the year in unfunded ABO_{FAS} plus contributions. For expense purposes the unfunded ABO_{FAS} would be:

$$\begin{array}{ll} ABO_{Basic} - Assets, & \text{if: } ABO_{Basic} > Assets \\ \$0, & \text{if: } ABO_{Basic} < Assets < ABO_{Indexed} \\ ABO_{Indexed} - Assets, & \text{if: } ABO_{Indexed} < Assets \end{array}$$

If unfunded $ABO_{FAS} = 0$ at the beginning and end of the year then the expense equals the contribution and great transparency is achieved. The difference between ABO_{Basic} and $ABO_{Indexed}$ is that the ABO_{Basic} is based on a FAS discount rate (e.g., 5.75 percent) and the $ABO_{Indexed}$ is based on a rate that is less by the amount of the indexation rate (e.g., 5.75 percent - 1.5 percent).

Our intent is to design a plan for an employer who would want to keep market value above the level of ABO_{Basic} and possibly at or above $ABO_{Indexed}$. This would put all assets to use (except those above $ABO_{Indexed}$). It also makes the expense equal the contribution, allows a margin for losses from equity investments and minimizes PBGC exposure.

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From a funding perspective we would propose the following:

1. There would be no credit balance.
2. The $NC_{Indexed}$ would always be required to be contributed unless $Assets > ABO_{Indexed}$.
3. An amortization payment would also be required if $Assets < ABO_{Basic}$.
4. Past Service benefit improvements could not be made unless (1) the funded ratio does not change (i.e. improvements immediately funded to existing funding level) or (2) $Assets > ABO_{Indexed}$. This is an important feature to protect existing participants and is critical to the design.
5. Employers could always fund (deduct) up to $ABO_{Indexed}$ (even if the contribution were more than the Normal Cost) since 100 percent goes immediately toward a real benefit promise.

Benefits could be frozen but indexation would continue unless assets fell below ABO_{Basic} or the plan was terminated.

Lump sums should be avoided but if paid would not include any future indexing unless at or near plan termination when all $Assets < ABO_{Indexed}$ would belong to the participants.

I could tie many features of this design to comments made by most of the speakers at the Vancouver symposium since their thoughts were my motivation.

Section 2: Investment Discussion:

The employer has two objectives:

- (1) keep assets above $ABO_{Indexed}$ in order to reduce or eliminate contributions, maximize benefits offered to employees and provide a source of funds for benefit improvements that might meet employer goals.
- (2) keep assets from dropping below the level of ABO_{Basic} to avoid extra cost/expense associated with unfunded liabilities.

Participants have an interest in keeping the funding at the level of $ABO_{Indexed}$ to maximize indexing. When funding is at the level of $ABO_{Indexed}$ employees might prefer all assets be fixed-income securities, which immunize the indexed liabilities. This might be difficult with long liability durations.

PBGC might always prefer fixed-income investing, especially when assets are near or below ABO_{Basic} .

I suggest the following guidelines:

- A minimum amount of investment-grade fixed-income securities be set, which slides with the level of

funding. The scale would range from 80 percent when assets are at or below ABO_{Basic} to 30 percent when assets are at $ABO_{Indexed}$. Thirty percent of $ABO_{Indexed}$ would be the limit if assets are above $ABO_{Indexed}$.

- Assets not required to be in fixed-income securities can be in any investment allowed for defined benefit plans (e.g. equities, real estate, etc.).
- The minimum fixed-income allocation would be reset (be effective) three months into the plan year based on year-end assets and projection of current liabilities from the prior year's valuation. Liabilities would be adjusted for interest rates as of the date assets are valued.

When assets are above ABO_{Basic} (particularly as they near $ABO_{Indexed}$), participants might view the investment in equities as the sponsor gambling with their money. However, this would be part of the initial contract.

Section 3: Other Key Issues Discussion:

1. Those who have reviewed earlier drafts of this proposal said that their main concern was that part of the participant's benefit was at risk and possibility not within the meaning of "definitely determinable." The part of the benefit they are referring to is *future* indexation. This is indeed true. However, I would like to point out that while the COLA/indexation is at risk, almost no ERISA plan contains an automatic COLA. Therefore, what we suggest be put at risk does not currently exist as a promise to most participants.
2. Another concern is that the action of plan sponsors will negatively impact funding for the benefit of the plan sponsor at the expense of current participants. We have tried to eliminate such problems. However, the biggest remaining risk is related to investment decisions. This leads to an old discussion about what role employees should have with a plan's investment allocation. This new design does change some of the traditional arguments about who bears the risk. I have not suggested what role (if any) employees should have. However, I would ask those concerned to also consider this issue in a multi-employer setting. Regardless of whoever sets the investment policy, I would expect there to be discussion about the ratio of fixed-income investments to ABO_{Basic} which we have tried to address above.
3. I have not prescribed a level of indexation. I think that the level should fall within the range of 1.5 percent to 5 percent per year. The lower end gives PBGC

some protection and creates some funding target above the level of ABO_{Basic} . The high end of 5 percent prevents too much of the benefit from being a promise that might not be fulfilled. However, I invite others to argue about limits. Plan amendments that lower the level of the index can also be a problem.

4. The range of indexation for funding assumptions would also be 1.5 percent to 5 percent. If the benefit were designed with fixed indexes, they would match the funding assumption. I would allow the plan provision to be tied to the CPI with a cap of no more than 5 percent. I would require the CPI-based index to be funded assuming the cap is reached in the future for $ABO_{Indexed}$. The only case where I would let the indexation of benefits be less than 100 percent of the funding assumption when assets are greater than $ABO_{Indexed}$ is when the actual CPI increase is less than the cap.
5. What might a participant think? It is likely that the initial benefit will be less due to (1) lower gross interest assumptions used to determine Normal Cost and (2) reducing net interest rates further to anticipate indexing. Therefore, a traditional plan might offer 50 percent to 100 percent more in terms of an initial benefit. This would not look as favorable to employees but must be balanced with the fact that employers are currently “voting with their feet” by walking away from DB plans.
6. Data Quality: From a participant’s perspective, error in the data provided to the valuation actuary is not material under existing DB plans. However, if an employee’s contribution to a DC plan is not credited to the participant’s account and is allocated as earnings to other accounts, the participant does care. Because the funding level in this proposed DB plan impacts the indexing of benefits, data matters. I don’t think we can cover all the data quality issues and responsibilities of the actuary. However, we would suggest that the increases be fixed once the equivalent of the Schedule B is filed.
7. Turnover and Retirement Rate assumptions: To the extent that these assumptions are the actuary’s best estimate, it should be acceptable to continue to anticipate forfeitures and to assume not everyone will retire at the age that maximizes value. However, if actuaries use these as levers to minimize cost they will be counterproductive.
8. Split indexes—Pre- vs. Post-Retirement: If simplicity were all that mattered we would not suggest separate indexes be used pre- vs. post-employment. However, employers often like the fact that final average pay plans reward employees that perform better (i.e., are given the largest pay raises). For this reason, we suggest allowing an alternative to a single index. Those interested in more details on this can contact me and I will send them a longer version of my proposal. ♦

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ATTENTION NEW PENSION SECTION MEMBERS!

Only Pension Section members have access to “Investment Statistics for Actuaries” available from the section Web page (under Resources & Bibliographies). To receive the user name and password, please contact Lois Chinnock, SOA sections manager, at 847.706.3524 or lchinnock@soa.org .

Summary of 2004 IRS, PBGC, Federal Income Tax, Social Security and Medicare Amounts

By Heidi Rackley, Scott Tucker and Barbara McGeogh
of the Washington Resource Group of Mercer Human Resource Consulting

This article summarizes 2004 cost-of-living adjustments related to employee benefit plans, including: (i) IRS limits applicable to qualified retirement plans, transportation fringe benefits, adoption assistance programs, medical savings accounts and long-term care plans; (ii) PBGC guaranteed benefits; (iii) federal income tax factors; (iv) Social Security and Supplemental Security Income; (v) Medicare; and (vi) covered compensation.

IRS qualified retirement plan limits

Many of the IRS limits applicable to qualified retirement plans will increase in 2004. In contrast, most of the CPI-adjusted limits remained unchanged in 2003 due to low inflation and rounding rules. For the limits that weren't increased in 2003, the past two years' inflation is combined, for a total increase over 2002 limits of

IRS Limit	Post-EGTRRA				Pre-EGTRRA 2001
	2004 Unrounded	2004 Rounded	2003	2002	
401(k), 403(b), and eligible 457 plan elective deferral limit ¹	\$13,000	\$13,000	\$12,000	\$11,000	\$10,500
414(v)(2)(B)(i) catch-up contribution limit (plans other than SIMPLE plans) ¹	3,000	3,000	2,000	1,000	N/A
408(p)(2)(E) SIMPLE plan elective deferral limit ¹	9,000	9,000	8,000	7,000	6,500
414(v)(2)(B)(ii) SIMPLE plan catch-up contribution limit ¹	1,500	1,500	1,000	500	N/A
408(k)(2)(C) SEP minimum compensation	467	450	450	450	450
219(b)(1)(A) IRA maximum deductible amount ¹	3,000	3,000	3,000	3,000	2,000
219(b)(1)(B) IRA catch-up contribution amount ¹	500	500	500	500	N/A
415(b) defined benefit maximum annuity	166,128	165,000	160,000	160,000	140,000
415(c) defined contribution maximum annual addition	41,532	41,000	40,000	40,000	35,000
401(a)(17) and 408(k)(3)(C) compensation limit	207,660	205,000	200,000	200,000	170,000
401(a)(17) compensation limit for eligible participants in certain governmental plans in effect July 1, 1993	306,760	305,000	300,000	295,000	285,000
414(q)(1)(B) highly compensated employee and 414(q)(1)(C) top-paid group	93,824	90,000	90,000	90,000	85,000
416(i)(1)(A)(i) officer compensation for top-heavy plan key employee definition	134,979	130,000	130,000	130,000	70,000
1.61-21(f)(5) control employee for fringe benefit valuation purposes					
Officer compensation	83,565	80,000	80,000	80,000	75,000
Employee compensation	167,130	165,000	160,000	160,000	155,000
409(o)(1)(C) tax-credit ESOP distribution period					
five-year maximum balance	830,640	830,000	810,000	800,000	780,000
one-year extension	166,128	165,000	160,000	160,000	155,000

¹ 2004 limit is set by statute

3.8 percent (i.e., the 1.6 percent increase in third quarter CPI-U from 2001 to 2002 is compounded by the 2.2 percent increase in third quarter CPI-U from 2002 to 2003). As a result, many 2004 rounded limits will increase from their 2003 values.

The table on the previous page shows the rounded and unrounded 2004 limits and the prior four years' limits. The IRS published the 2004 rounded limits in Notice 2003-73.

Other employee-benefit-related IRS limits

The 2004 limits for qualified transportation fringe benefits, qualified adoption assistance programs and medical savings accounts (MSA) reflect the 2.3 percent increase in the average CPI-U for the 12 months ending August 31, 2003 over the average CPI-U for the 12 months ending August 31, 2002 and are rounded to multiples of \$5, \$10 or \$50. (The Transportation Equity Act for the 21st Century changed section 132(f) qualified transportation fringe benefit limits and cost-of-living adjustment factors. EGTRRA increased section 137 qualified adoption assistance program limits and provided for future cost-of-living adjustments to those limits. These changes were effective for tax years beginning after 2001.) The 2004 limits for qualified long-term care premiums and per diem amounts reflect the 3.9 percent increase in the medical care component of CPI-U from August 2002 to August 2003 and are rounded to the nearest multiple of \$10. The table at right shows the rounded limits for 2004 and the four previous years. The IRS published the 2004 rounded limits in Rev. Proc. 2003-85.

PBGC guaranteed benefits

The maximum PBGC guaranteed monthly benefit is adjusted annually on the basis of changes in the Social Security "old law" contribution and benefit base. For a single-employer defined benefit plan terminating in 2004, the maximum guaranteed benefit will be \$3,698.86 per month—a 1 percent increase over the 2003 limit of \$3,664.77. This amount is adjusted if benefit payments start before age 65 or if benefits are paid in a form other than a single-life annuity. Some of the guaranteed amount may be paid from the plan's assets, and participants may receive more if the plan is better funded or the PBGC can recover other amounts from the plan sponsor.

Federal income tax—EGTRRA and Jobs and Growth Act changes

EGTRRA reduced marginal tax rates across the board and created a new 10 percent tax bracket carved out of

IRS Limit	2004	2003	2002	2001	2000
132(f) tax-free qualified transportation fringe benefit					
Parking	\$195	\$190	\$185	\$180	\$175
Transit passes or commuter highway vehicle transportation	100	100	100	65	65
137 qualified adoption assistance program					
Exclusion for child with special needs (regardless of expenses incurred)	10,390	10,160	10,000	6,000	6,000
Aggregate limit on expenses incurred for all taxable years (child without special needs)	10,390	10,160	10,000	5,000	5,000
Phase-out begins at adjusted gross income of	155,860	152,390	150,000	75,000	75,000
220(c)(2) MSA high deductible health plan – self-only coverage					
Minimum annual deductible	1,700	1,700	1,650	1,600	1,550
Maximum annual deductible	2,600	2,500	2,500	2,400	2,350
Maximum out-of-pocket limit	3,450	3,350	3,300	3,200	3,100
220(c)(2) MSA high deductible health plan – family coverage					
Minimum annual deductible	3,450	3,350	3,300	3,200	3,100
Maximum annual deductible	5,150	5,050	4,950	4,800	4,650
Maximum out-of-pocket limit	6,300	6,150	6,050	5,850	5,700
213(d) qualified long-term care premium limits					
Age 40 or younger	260	250	240	230	220
41 – 50	490	470	450	430	410
51 – 60	980	940	900	860	820
61 – 70	2,600	2,510	2,390	2,290	2,200
Over 70	3,250	3,130	2,990	2,860	2,750
7702B(d)(4) qualified long-term care contract per diem limit					
	230	220	210	200	190

the lower portion of the 15 percent tax bracket. EGTRRA tax provisions were originally scheduled to be phased in over several years, including gradual reduction and ultimate repeal of the estate tax (starting in 2002) and the limits on itemized deductions and personal exemptions (beginning in 2006), with marriage penalty relief beginning in 2005.

The Jobs and Growth Tax Relief Reconciliation Act of 2003 accelerated a number of EGTRRA's personal income tax cuts, including reductions in tax rates and phase-in of marriage penalty relief beginning in 2003. The Act made a number of temporary changes for 2003 and 2004, including increasing the child tax credit to \$1,000, increasing the amount of income subject

(continued on page 10)

Provision	Pre-EGTRRA	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Tax rates	39.6%	39.1%	38.6%					35.0%			
	36.0%	35.5%	35.0%					33.0%			
	31.0%	30.5%	30.0%					28.0%			
	28.0%	27.5%	27.0%					25.0%			
	15.0%	10% of first \$6,000/\$12,000 of income for singles/married respectively; 15% for remaining portion of tax bracket	Breakpoints between 10% and 15% rates increased to \$7,000/\$14,000 for 2003, then indexed for inflation for 2004				Reverts to 10% of first \$6,000/\$12,000 of income for singles/married respectively; 15% for remaining portion of tax bracket	Breakpoints between 10% and 15% rates increased to \$7,000/\$14,000		Breakpoints between 10% and 15% rates indexed for inflation	
Child credit	\$500	\$600	\$1,000	\$700						\$800	\$1,000
Saver tax credit	N/A	N/A	Applicable percentage ¹ of qualified retirement savings contributions up to \$2,000				Expired				
Estate tax											
<i>Top rate</i>	55%	55%	50%	49%	48%	47%	46%	45%			Repealed
<i>Exemption (millions)</i>	\$0.675	\$0.67	\$1.0		\$1.5		\$2.0		\$3.5		Repealed
Marriage penalty relief beginning in 2003											
<i>Standard deduction for married as % of single</i>				200%	174%	184%	187%	190%	200%		
<i>15% bracket maximum income for married as % of single</i>				200%	180%	187%	193%	200%			
Phase-out of personal exemption and itemized deductions beginning in 2006							Phase-out amount is reduced by 1/3	Phase-out amount is reduced by 2/3	Repealed		
Alternative minimum tax exemption											
<i>Joint return or surviving spouse</i>	\$45,000	\$49,000	\$58,000				\$45,000				
<i>Other individual</i>	\$33,750	\$35,750	\$40,250				\$33,750				
Top capital gains tax rate	20%		15% (capital gains realized on or after 5/6/03 and before 2009)						20% ²		
Top dividend tax rate	39.6%	39.1%	38.6%	15%				35%			
¹ Saver tax credit applicable percentage is a function of filing status and adjusted gross income (AGI), as shown below:											
<u>Applicable percentage</u>			<u>Married filing jointly AGI</u>			<u>Head of household AGI</u>			<u>Other filing status AGI</u>		
50%			up to \$30,000			up to \$22,500			up to \$15,000		
20%			\$30,001 – \$32,500			\$22,501 – \$24,375			\$15,001 – \$16,250		
10%			\$32,501 – \$50,000			\$24,376 – \$37,500			\$16,251 – \$25,000		
0%			over \$50,000			over \$37,500			over \$25,000		
² Once the provisions of the Jobs and Growth Act expire, a top rate of 18% may apply to certain qualified five-year gains.											

to the new 10 percent tax rate, and increasing the alternative minimum tax exemption. The Act also temporarily (through 2008) reduced to 15 percent the top tax rate imposed on corporate dividends received by individuals after 2002 and on individuals' capital gains realized on or after May 6, 2003.

The table above summarizes the effective dates of key federal income tax changes made by EGTRRA and the Jobs and Growth Act. Unless extended by future

legislation, these changes will expire after 2010 and revert to pre-EGTRRA provisions.

Federal income tax factors

The breakpoints between tax rates and various other federal income tax factors are adjusted annually on the basis of year-to-year changes in the average CPI-U for the 12 months ending August 31—a 2.3 percent increase, before rounding, for 2004. (There is an excep-

Item and Filing Status	2004	2003
Personal Exemption	\$3,100	\$3,050
Standard Deduction		
Single	4,850	4,750
Head of Household	7,150	7,000
Married, Filing Jointly ¹	9,700	9,500
Married, Filing Separately ¹	4,850	4,750
Additional Standard Deduction (for elderly or blind)		
Unmarried	1,200	1,150
Married (each)	950	950
"Kiddie" Deduction	800	750
Breakpoint between 10% and 15% rates		
Single ¹	7,150	7,000
Head of household	10,200	10,000
Married, filing jointly ¹	14,300	14,000
Married, filing separately ¹	7,150	7,000
Breakpoint between 15% and 25% ¹ rates		
Single	29,050	28,400
Head of household	38,900	38,050
Married, filing jointly	58,100	47,450
Married, filing separately	29,050	23,725
Breakpoint between 25% ¹ and 28% ¹ rates		
Single	70,350	68,800
Head of household	100,500	98,250
Married, filing jointly	117,250	114,650
Married, filing separately	58,625	57,325
Breakpoint between 28% ¹ and 33% ¹ rates		
Single	146,750	143,500
Head of household	162,700	159,100
Married, filing jointly	178,650	174,700
Married, filing separately	89,325	87,350
Breakpoint between 33% ¹ and 35% ¹ rates		
Single	319,100	311,950
Head of household	319,100	311,950
Married, filing jointly	319,100	311,950
Married, filing separately	159,550	155,975

¹2003 amount or tax rate was changed by the Jobs and Growth Tax Relief Reconciliation Act of 2003 and therefore does not match the 2003 amount shown in the February 2003 *Pension Section News*.

tion for the breakpoint between the 10 percent bracket and the 15 percent bracket, which is set by statute for 2003 and 2005 – 2008.) The IRS published the 2004 factors in Rev. Proc. 2003-85. Some 2003 values in the table at the left do not match the 2003 values shown in the February 2003 *Pension Section News* because of changes made by the Jobs and Growth Tax Relief Reconciliation Act of 2003 effective for the 2003 calendar year.

Personal exemptions are currently phased out for taxpayers whose adjusted gross incomes exceed specified amounts (which vary by tax filing status). These "threshold amounts" at which phase-out begins and

Filing status	2004		2003	
	Phase-out begins at	Phase-out completed after	Phase-out begins at	Phase-out completed after
Unmarried	\$142,700	\$265,200	\$139,500	\$262,000
Head of household	178,350	300,850	174,400	296,900
Married, filing jointly	214,050	336,550	209,250	331,750
Married, filing separately	107,025	168,275	104,625	165,875

ends are shown above for 2003 and 2004. EGTRRA reduces the phase-out of personal exemptions beginning in 2006 and eliminates it in 2010.

Total itemized deductions for 2004 are reduced by 3 percent of a taxpayer's adjusted gross income in excess of \$142,700 (\$71,350 for married, filing separately), an increase from \$139,500 in 2003 (\$69,750 for married, filing separately). This reduction in itemized deductions is phased out beginning in 2006 and eliminated in 2010.

Certain taxpayers are entitled to a refundable earned income tax credit (EITC) equal to the maximum credit amount reduced by the phase-out amount. The earned income amount is the amount of earned income at or above which the maximum amount of the earned income credit is allowed. The phase-out amount equals the product of the phase-out percentage (based on the number of qualifying children) multiplied by the excess, if any, of the taxpayer's adjusted gross income or earned income, whichever is greater, over the threshold phase-out amount. For tax years beginning after 2001, only taxable earned income (excluding salary reduction contributions under 401(k) plans, cafeteria plans and health or dependent care FSAs) is taken into account when calculating the EITC. EGTRRA marriage penalty relief increases the threshold phase-out amount for joint return filers by \$1,000 in 2002 – 2004, by \$2,000 in 2005 – 2007 and by \$3,000 after 2007.

EITC value	2004	2003
Earned income amount		
No qualifying children	\$5,100	\$4,990
One qualifying child	7,660	7,490
Two or more qualifying children	10,750	10,510
Maximum credit amount		
No qualifying children	390	382
One qualifying child	2,604	2,547
Two or more qualifying children	4,300	4,204
Threshold phase-out amount (and percentage), unless married filing jointly		
No qualifying children (7.65%)	6,390	6,240
One qualifying child (15.98%)	14,040	13,730
Two or more qualifying children (21.06%)	14,040	13,730
Phase out completed, unless married filing jointly		
No qualifying children	11,490	11,230
One qualifying child	30,338	29,666
Two or more qualifying children	34,458	33,692
Threshold phase-out amount (and percentage), married filing jointly		
No qualifying children (7.65%)	7,390	7,240
One qualifying child (15.98%)	15,040	14,730
Two or more qualifying children (21.06%)	15,040	14,730
Phase out completed, married filing jointly		
No qualifying children	12,490	12,230
One qualifying child	31,338	30,666
Two or more qualifying children	35,458	34,692

Average Monthly Social Security Benefit	After 2.1% COLA	Before 2.1% COLA
All retired workers	\$922	\$903
Aged couple, both receiving benefits	1,523	1,492
Widowed mother and two children	1,904	1,865
Aged widow(er) alone	888	870
Disabled worker, spouse, and children	1,442	1,412
All disabled workers	862	844

Social Security and Supplemental Security Income (SSI) amounts

Social Security benefits payable January 1, 2004, will increase 2.1 percent—the increase in CPI-W from the third quarter of 2002 to the third quarter of 2003. The average monthly Social Security benefits before and after the 2.1 percent COLA are shown in the table above. The 2004 taxable wage base will increase 1%, from \$87,000 to \$87,900, determined from the change in deemed average annual wages from 2001 to 2002. The table on the next page shows this and other indexed 2003 and 2004 Social Security and SSI values.

Medicare premiums, coinsurance, and deductibles

The following table shows the increases in Medicare premiums, coinsurance and deductible amounts from 2003 to 2004.

(continued on page 15)

Social Security/SSI Value	2004	2003
Cost-of-living increase	2.1%	1.4%
Average annual wage (second preceding year)	\$33,252.09	\$32,921.92
OASDI contribution and benefit base (wage base)	87,900	87,000
“Old law” contribution and benefit base	65,100	64,500
Retirement earnings test exempt amount (annual)		
Under full retirement age (full year)	11,640	11,520
Year individual attains full retirement age (period before attaining full retirement age)	31,080	30,720
Wages needed for a quarter of coverage	900	890
Disability thresholds		
Substantial gainful activity – non-blind	810	800
Substantial gainful activity – blind	1,350	1,330
Trial work period	580	570
Coverage thresholds for:		
Domestic employees	1,400	1,400
Election workers	1,200	1,200
Maximum monthly Social Security benefit for a worker retiring at full retirement age (age 65 and 2 months for those born in 1938, age 65 and 4 months for those born in 1939)	1,825	1,741
Bend-points – PIA formula applied to average indexed monthly earnings (AIME)		
90% of AIME up to	612	606
32% of AIME over first bend-point up to	3,689	3,653
15% of AIME over second bend-point		
Bend-points – maximum family benefit formula applied to worker’s PIA		
150% of PIA up to	782	774
272% of PIA over first bend-point up to	1,129	1,118
134% of PIA over second bend-point up to	1,472	1,458
175% of PIA over third bend-point		
SSI federal payment standard		
Individual	564	552
Couple	846	829
SSI resources limit		
Individual	2,000	2,000
Couple	3,000	3,000
SSI student exclusion limits		
Monthly limit	1,370	1,340
Annual limit	5,520	5,410
Part A – Hospital Insurance		
Inpatient hospital deductible	\$876.00	\$840.00
Coinsurance		
Daily coinsurance payment for 61 – 90 days of inpatient hospital care	219.00	210.00
Coinsurance for up to 60 lifetime reserve days	438.00	420.00
Daily coinsurance payment for 21 – 100 days in a skilled nursing facility following a hospital stay of at least 3 days	109.50	105.00
Voluntary premium for persons not eligible for monthly benefits	343.00	316.00
Alternative reduced premium for persons with 30 – 39 credits	189.00	174.00

Part B – Medical Insurance	2004	2003
Annual deductible	100.00	100.00
Monthly premium	66.60	58.70

Calendar year of birth	Social Security full retirement age	Calendar year of Social Security retirement age	Covered compensation		Rounded covered compensation	
			2004	2003	2004	2003
1910	65	1975	5,316	5,316	6,000	6,000
1911	65	1976	5,664	5,664	6,000	6,000
1912	65	1977	6,060	6,060	6,000	6,000
1913	65	1978	6,480	6,480	6,000	6,000
1914	65	1979	7,044	7,044	6,000	6,000
1915	65	1980	7,692	7,692	9,000	9,000
1916	65	1981	8,460	8,460	9,000	9,000
1917	65	1982	9,300	9,300	9,000	9,000
1918	65	1983	10,236	10,236	9,000	9,000
1919	65	1984	11,232	11,232	12,000	12,000
1920	65	1985	12,276	12,276	12,000	12,000
1921	65	1986	13,368	13,368	12,000	12,000
1922	65	1987	14,520	14,520	15,000	15,000
1923	65	1988	15,708	15,708	15,000	15,000
1924	65	1989	16,968	16,968	18,000	18,000
1925	65	1990	18,312	18,312	18,000	18,000
1926	65	1991	19,728	19,728	21,000	21,000
1927	65	1992	21,192	21,192	21,000	21,000
1928	65	1993	22,716	22,716	24,000	24,000
1929	65	1994	24,312	24,312	24,000	24,000
1930	65	1995	25,920	25,920	27,000	27,000
1931	65	1996	27,576	27,576	27,000	27,000
1932	65	1997	29,304	29,304	30,000	30,000
1933	65	1998	31,128	31,128	30,000	30,000
1934	65	1999	33,060	33,060	33,000	33,000
1935	65	2000	35,100	35,100	36,000	36,000
1936	65	2001	37,212	37,212	36,000	36,000
1937	65	2002	39,444	39,444	39,000	39,000
1938	65 & 2 months	2004	43,992	43,968	45,000	45,000
1939	65 & 4 months	2005	46,284	46,236	45,000	45,000
1940	65 & 6 months	2006	48,576	48,492	48,000	48,000
1941	65 & 8 months	2007	50,832	50,724	51,000	51,000
1942	65 & 10 months	2008	53,028	52,908	54,000	54,000
1943	66	2009	55,164	55,008	54,000	54,000
1944	66	2010	57,276	57,096	57,000	57,000
1945	66	2011	59,352	59,148	60,000	60,000
1946	66	2012	61,392	61,152	60,000	60,000
1947	66	2013	63,396	63,132	63,000	63,000
1948	66	2014	65,256	64,968	66,000	66,000
1949	66	2015	67,020	66,720	66,000	66,000
1950	66	2016	68,688	68,352	69,000	69,000
1951	66	2017	70,272	69,912	69,000	69,000
1952	66	2018	71,760	71,376	72,000	72,000
1953	66	2019	73,200	72,780	72,000	72,000
1954	66	2020	74,580	74,136	75,000	75,000
1955	66 & 2 months	2022	77,148	76,656	78,000	78,000
1956	66 & 4 months	2023	78,372	77,856	78,000	78,000
1957	66 & 6 months	2024	79,512	78,972	81,000	78,000
1958	66 & 8 months	2025	80,556	79,992	81,000	81,000
1959	66 & 10 months	2026	81,540	80,952	81,000	81,000
1960	67	2027	82,464	81,852	81,000	81,000
1961	67	2028	83,340	82,692	84,000	84,000
1962	67	2029	84,120	83,448	84,000	84,000
1963	67	2030	84,876	84,180	84,000	84,000
1964	67	2031	85,596	84,876	87,000	84,000
1965	67	2032	86,244	85,500	87,000	87,000
1966	67	2033	86,796	86,028	87,000	87,000
1967	67	2034	87,240	86,436	87,000	87,000
1968	67	2035	87,564	86,748	87,900	87,000
1969	67	2036	87,780	86,940	87,900	87,000
1970	67	2037	87,864	87,000	87,900	87,000
1971 or later	67	2038 or later	87,900	87,000	87,900	87,000

Covered compensation

For qualified retirement plans, the permitted and imputed disparity limits are based on covered compensation—the average OASDI contribution and benefit base for the 35-year period ending with the year the employee attains Social Security retirement age. In lieu of using the actual covered compensation amount, qualified plans may determine permitted or imputed disparity using a rounded covered compensation table published annually by the IRS. The 2004 table, published in Rev. Rul. 2003-124, rounds values

to the nearest \$3,000. The IRS rounds Social Security retirement ages up to the next higher integer for covered compensation purposes, even though the actual Social Security full retirement age increases in two-month increments. ♦

Heidi Rackley, Scott Tuckee and Barbara McGeogh are all principles in the Washington Resource Group of Mercer Human Resource Consulting. Heidi is an actuary; Scott and Barbara are lawyers. The WRG is a national resource for Mercer consultants and clients on legislative and regulatory developments; tax, ERISA, HIPAA, employment law and other federal and state law issues; retirement, compensation, health and group benefit plan design and administration; and government relations.

Chairperson's Corner • from page 3

recently partnered with the International Foundation of Employee Benefit Plans to co-sponsor a two-day seminar on pension issues for multinational employers, drawing an audience of plan sponsors as well as consulting actuaries.

From a financial perspective, the Pension Section is entering 2004 in a sound position. We have strong continuing membership and a healthy accumulated reserve, and are committed to making prudent investments of the section's financial resources to deliver useful resources and services to section members. As part of a review of issues relating to the governance of the Pension Section in 2003, the Council confirmed the criteria with which we evaluate proposed projects, reviewed our policy for managing the section's financial resources and engaged in a brainstorming exercise to identify the types of issues we want to address to benefit section members over the next several years. This has been reflected directly in our work in December and January to plan 2004 research projects, publications and meetings/seminars—more on this will appear in upcoming issues of the *Pension Section News*.

Of critical importance to the continuing success of the Pension Section is the support and engagement of volunteers drawn from the section membership. The SOA offers excellent professional staffing to support the section's initiatives, ensuring that volunteers' time is conserved and used as effectively as possible. There are many avenues for members to pursue, depending on where your interests lie. More on this, as well, will appear in upcoming issues of the *Pension Section News*.

Until then, enjoy the articles in this issue, and let us know if you have any comments, questions or suggestions. ♦

Factors Affecting Retirement Mortality

By Emily K. Kessler, FSA

The Society of Actuaries is pleased to announce the publication of Phase II of Factors Affecting Retirement Mortality (FARM) by Victor Modugno. The first FARM paper, by Robert Brown and Joanne McDaid, completed a comprehensive literature search that identified 10 factors, in addition to age and gender, which affect retiree mortality. The 10 factors were education, income, occupation, marital status, religion, health behaviors, smoking, alcohol, obesity and race/ethnicity. Phase II reviews existing Society experience studies to determine what factors

The shift in pension plans from defined benefits to defined contributions leads to retirees managing their own money and assuming their own longevity risk.

could be added to those studies and considers methods for reflecting additional factors in mortality tables.

The paper looked at the work of six SOA experience studies committees. The author raised concerns about the ability of various committees to gather additional factors to provide actuaries with up-to-date and accurate mortality experience. Insurance companies (for annuity and life insurance data) and plan sponsors and their actuaries (for uninsured pension plan data) are reluctant to provide additional factors. These groups

cited privacy concerns and resource allocation issues. Often additional factors are not collected, or companies are unwilling to supply them for SOA studies. In some cases, particularly the group annuity market, the lack of sales has led to a largely closed group of business with limited data.

The author concludes that lack of additional factors could hinder the growth of the insurance and annuity market. He cites two additional products that may not be able to be fairly priced without additional information: longevity insurance and fair valued individual annuities.

Individual need for longevity insurance and fair valued individual annuities may increase. The shift in pension plans from defined benefit to defined contribution plans, as well as the growth in lump sum payments, leads to retirees managing their own money and assuming their own longevity risk. Markets currently assume anyone purchasing annuities or other products to hedge longevity risk has expectations of longer than average life expectancy and price products accordingly. To fairly price these products, the market would have to understand how factors leading to less-than-perfect health, such as smoking and obesity, affect life expectancy.

The new paper (FARM II) and the original study are both available at <http://www.soa.org/research/farm.html>. The Committee on Retirement Systems Research, the Committee on Social Security - Retirement and DI and the Committee on Life Insurance Research cosponsored the study. ♦

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Pension Section Council Summary of Activities

During the third quarter of 2003, the Pension Section Council had meetings via conference calls in July and August and met in-person in Philadelphia on September 12, 2003. Following is a summary of the current activities of the Pension Section Council:

Investment Statistics

In September, the Pension Section made available a new reference for investment statistics: Investment Statistics for Actuaries. It is available at http://soa2.syn.net/stats/stats_employee.html. The reference includes the S&P 500, Wilshire 5000, Russell 2500, NCREIF Property, MSCI World and MSCI EAFE. It also contains a variety of Lehman Brothers bond indices, Treasury rates and yield spreads for various classifications of bonds. The information will be updated quarterly and is downloadable in Excel and PDF files. Please note that the site is password protected.

Jordan is Back!

The Pension Section aided the Society of Actuaries in making *Life Contingencies* by C.W. Jordan available again. The Jordan text is an excellent introductory guidebook on basic actuarial mathematics for new students and nonactuarial professionals.

Yield Curves

The Pension Section of the Society of Actuaries is commissioning a paper to (i) provide an overview of the construction of a corporate bond yield curve, (ii) describe issues in its construction and (iii) discuss issues in its application to pension valuations. Further details are found in the Understanding the Corporate Bond Yield Curve Request for Paper at: http://www.soa.org/research/ucbyc_rfp.html.

Spring Meeting

The Pension Section is currently planning 16 sessions for the Spring SOA meeting to be held in Anaheim,

Calif. on May 19-21, 2004. The sessions will cover a variety of topics, including setting economic and demographic assumptions, investment monitoring, plan design, professionalism and a follow-up on the 2003 symposium "*The Great Controversy: Current Pension Actuarial Practice in Light of Financial Economics.*"

Research

Projects promoted by the Pension Section:

- A voluntary annuitization project by Moshe Milevsky, which will examine financial issues faced by individuals when they convert lump sum retirement savings balances into ongoing income streams.
- A project on pre-retirement influences by Linda Smith-Brothers, which will examine the various items that influence an employee's decision to retire.
- A project surveying retirement plan design preferences of both active workers and retirees. (Results from the survey were presented at the Spring SOA meeting.)

Financial Statement

Following is a summary of the council's 2003 Income and Expenses through June 2003:

Assets as of January 1, 2003—	\$137,000
Income—	\$97,000
Expenses	
Ongoing Expenses—	\$28,000
Ongoing Services to Members—	\$32,000
Special Projects—	\$10,000
Assets as of June 30, 2003—	\$164,000

Limitations on Liabilities for Actuarial Services

By Emily K. Kessler, FSA, SOA staff fellow, retirement systems

The National Association of State Retirement Administrators (NASRA) recently held its annual conference in Monterey, Calif. The paper “Limitations on Liabilities for Actuarial Services” was presented at that conference. The paper was written jointly by NASRA members representing state pension plans and NASRA associate members representing actuarial firms. It explores the issues faced by pension plans when they accept a limitation of liability, and for actuarial firms when there is no limitation of liability.

The paper states “Because of the critical role actuaries plan in pension administration, it is important that trustees and the firm’s representatives have confidence in one another. Actuarial firms also should not be held liable for errors that are the fault of the retirement system...or that are made under time

constraints that do not permit adequate attention to accuracy. Actuaries should qualify their results in writing if they believe they have been given inadequate time to conduct their review. At the same time, actuaries should be held accountable for errors that result from their own negligence, fraud, or incompetence.”

The paper goes on to provide suggestions for fiduciaries and actuarial firms to mitigate errors and disputes, including establishing strong lines of communication and clearly defining roles, responsibilities, scope of work and fee structure.

The full paper is available at the NASRA Web site: <http://www.nasra.org/resources/limitationsonliabilities.doc>. A copy of all papers and presentations from the conference are at <http://www.nasra.org/presentations/presentations2003.htm>. Other papers of interest are at <http://www.nasra.org/resources.htm> ◆

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HEALTH SECTION SPONSORED RESEARCH

“Aging Curves for Health Care Costs in Retirement”

The Web address is now available on the Pension Section Web page http://www.soa.org/sections/aging_curves.pdf

Letters to the Editor

Scrapping Social Security's Intermediate Cost Projections

The September edition contains explanatory text and principal economic and demographic assumption tables from the 2003 Annual Report of the Board of Trustees of the OASDI Trust Fund.

The following is my critique of these assumptions, which are selected by the trustees for the use of the Social Security actuaries in making the projections that appear in the annual reports.

Note that while the trustees state the future assumption factors are "inherently uncertain," this does not deter them from declaring the three sets of factors used (low cost, intermediate cost and high cost) to be "plausible," and the "intermediate set represents the Board's best estimate of the future course of the population and the economy."

Therein lies my concern; I do not believe it is possible to make plausible assumptions over 75 years. However, recognizing Social Security law requires 75-year projections be made, the Actuarial Standards of Practice (ASOPs) for making social insurance cost projections must accordingly be scrupulously observed to prevent undue subjectivity and political bias from playing a role. With regard to the latter, bear in mind that the trustees are high-level political appointees, including many not enamored of Social Security.

I will first present the results of a simple but revealing test I developed on the accuracy of the assumption factors. I presented this as a panelist at the June meeting of the Actuarial Society of Greater New York. I compared the actuarial projections of the assets as of 12/31/02 made at the end of each of the 10 years 1992 through 2001 with the actual assets on 12/31/02. The results appear in the chart at the right:

The chart suggests that (1) the high cost projection is so far off it deserves to be discarded, (2) the intermediate cost projection should be redesignated as high cost, (3) the low cost projection, since it is on target, merits promotion to the intermediate level, and a new low-cost basis needs to be developed.

Consider the ramifications. The intermediate basis currently projects the assets to run out in 2041, while the low-cost basis develops a surplus of \$18 trillion. At the end of the 75-year projection period, the difference grows to zero vs. \$83 trillion.

Under low cost, there is also a never-ending annual surplus. One political implication is that the annual surplus can be "borrowed" by the U.S. Treasury for a great many years without the need for repayment, so long as benefits can be paid in full. A second implication, based on calculations I have made, is that normal

retirement age 65 can be restored (age 67, based on an amendment in 1983, is now being phased in).

Consider, too, the significant effect of the puzzling tendency of the trustees, in setting the intermediate assumptions for 75 years, to make those for the last 68 years or so more conservative than the first eight. One marked example is the key assumption, the annual rate of increase in labor force, which drops from 1.1 percent to below 0.3 percent. Another important drop is in the real interest rate, from 3.3 percent to 3 percent.

There is additional evidence that the low-cost set of assumptions deserves upgrading to intermediate status, because the ASOPs have not been followed. See my article in *Contingencies*, "Social Security Finances Are in Fine Shape," May-June 1999 and my op-ed in the *Christian Science Monitor*, "Cooking Social Security's Deficit," Jan. 4, 2000. Visit my Web site, davidlanger.com, or contact me for copies.

The understanding of the actuarial dynamics of Social Security takes some effort, but I have been studying them for about eight years, and have been amply rewarded by the vistas that have been opened, including economics, federal budgets, history, the essence of the privatization movement, and, of course, politics.

I urge more actuaries to join in the quest for a professionally sound actuarial basis for valuing Social Security.
— David Langer, A.S.A., E.A.



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Projected Assets Compared to Actual Assets as of 12/31/02 (Actual assets equal \$1378 billion)

Calendar Year	Projected assets @ 12/31/02 from each Annual Report (Billions)			Discrepancy @ 12/31/02 between projected and actual assets			
	Low cost	Int. cost	High cost	Low cost	Int. cost	High cost	
1992	1537	1120	671	12%	-19%	-51%	
1993	1392	1048	669	1%	-24%	-51%	
1994	1432	1153	874	4%	-16%	-37%	
1995	1284	1068	845	-7%	-22%	-39%	
1996	1214	1109	968	-12%	-20%	-30%	
1997	1295	1225	1148	-6%	-11%	-17%	
1998	1350	1297	1278	-2%	-6%	-7%	
1999	1424	1407	1350	3%	2%	-2%	
2000	1410	1397	1353	2%	1%	-2%	
2001	1379	1372	1363	0%	0%	-1%	
				Average Discrepancy			
				Low cost	Int. cost	High cost	
				Cal. Years			
				1992-1994	5%	-20%	-46%
				1995-1997	-8%	-18%	-28%
				1998-2001	-1%	-1%	-3%
				1992-2002	0%	-11%	-24%

Prepared by David Langer, 9/23/03
Data from SS Trustees Annual Reports



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